

REP Centralised electrical connections





Centralised, ergonomic...

Applications

Centralised connections for all electrical circuits:

- control, power, thermocouples...for the Plastics industry
- on test benches, machines... for all industries...



Registered Community Design



Ergonomics

- Excellent guiding during connection (easy connection and protection of electrical contacts). Precision guiding makes connection easier and increases the lifespan of the contacts.
- Designed for many connections and disconnections.
- Fast and easy locking by simply rotating the control lever by a half turn.

Safety

Connection without any risk of error:

- only one possible connection position for plates
- indexed housings on the plates and inserts in the housings
- housings are protected against dust and liquid splashes. Protection rating IP 67 in the connected position in compliance with standard NFC 20.010.
- earthing for inserts and housings
- fast and safe locking

Safety options and additional equipment (see p. 6/7)

- Reversed control lever
- Proximity sensors
- Parking plate
- Foolproof keying kit
- Protective caps
- Carrying handles



... and reliable connections

Reliability

Excellent resistance to temperature and very good resistance to vibrations from crimped contacts.

Easy maintenance

- Individual replacement of contacts.
- Assembly and disassembly of inserts from behind without removing the plate housing.
- Disassembly of complete housing fitted with a harness by simply removing the elastic ring for immediate replacement.

Easy wiring

- Harness outlet straight or 90°.
- Harnesses connected using PG, NPT or metric female thread coupling.

Large choice of electrical connections

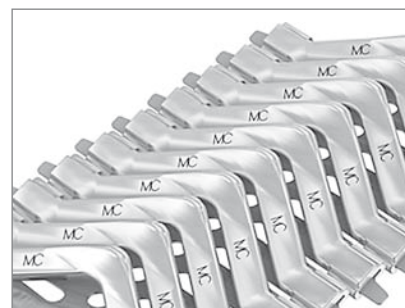
- 6 types of inserts from 2 to 36 contacts + earthing,
- Silver or gold contacts,
- Crimped contacts that can also be soldered.

Electrical contacts' lifespan and performance

thanks to the original Multilam[®] technology which guarantees conductivity resistance and quality.

These contacts are particularly suited to work environments subject to vibrations and/or differences in temperature.

High electrical conductivity, reduction in heating, energy saving, long term resistance.



The opportunity to spend less and contribute to a sustainable development programme
With Stäubli, you can rely on the performance of your equipment and reliability of long-term investments.

Full range

2 standard sizes

depending on the number of circuits to connect

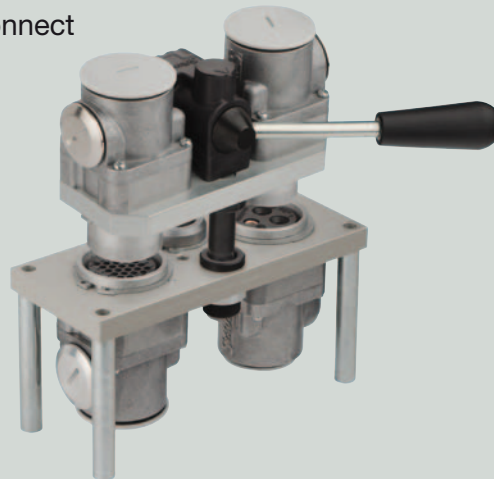
- **REP 103**

Model 2 connectors *

Very compact.

To connect up to 74 contacts in just one movement in a confined space.

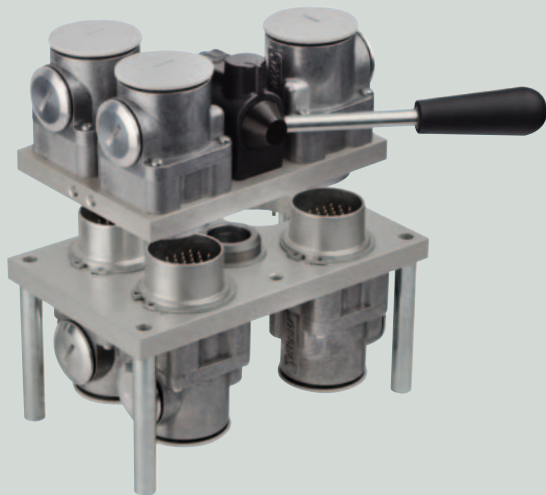
* also available in model 1 connector



- **REP 203**

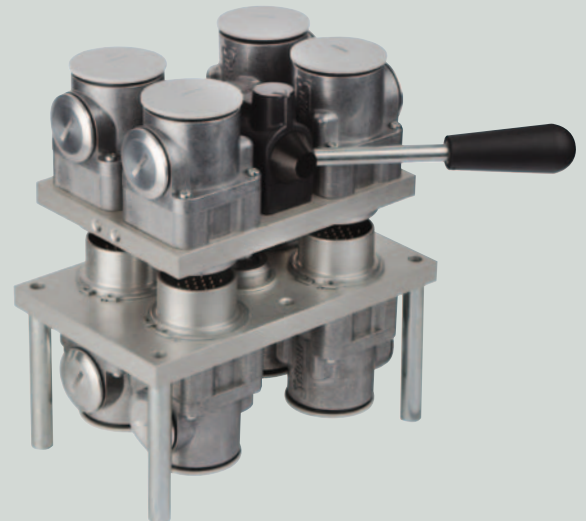
Model 3 connectors

To connect up to 111 contacts in just one movement.



Model 4 connectors

To connect up to 148 contacts in just one movement.



3 types of connections for electrical harnesses



PG, NPT or metric thread.

Wiring outlet straight or 90° and multi-directional for each housing (2 or 3 positions depending on the configurations)

Cable box not supplied.

2 types of seals for the housing

Standard nitrile.

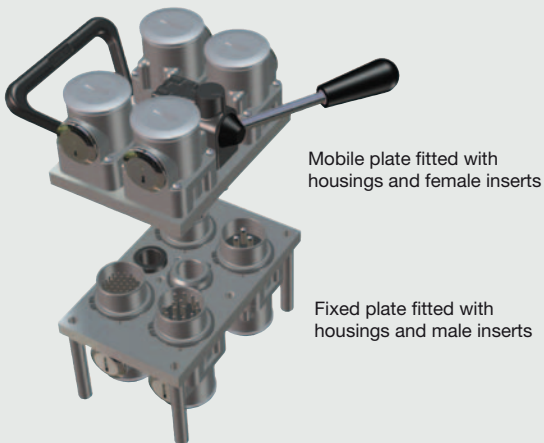
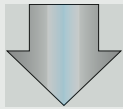
Fluorocarbon on request.

All plates are available in 2 configurations:

Configuration 1

- Power supply on mobile plate side

POWER SUPPLY

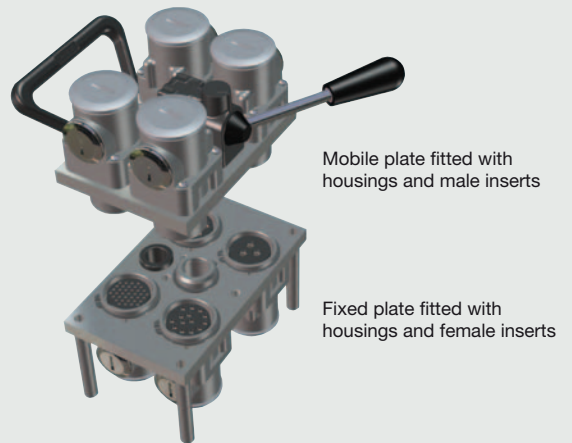


Mobile plate fitted with housings and female inserts

Fixed plate fitted with housings and male inserts

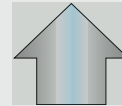
Configuration 2

- Power supply on fixed plate side



Mobile plate fitted with housings and male inserts

Fixed plate fitted with housings and female inserts

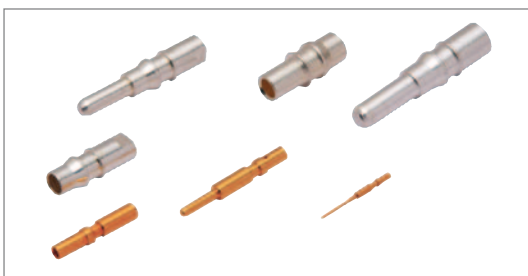


POWER SUPPLY

For totally safe handling, **the female contacts must always be fitted on the side of the power supply.**

2 types of contacts

Standard silver.
Gold as an option.



Crimped contacts.
These contacts can also be soldered.

Different types of inserts

from 2 to 36 contacts + earthing



To be ordered separately for customised configuration.

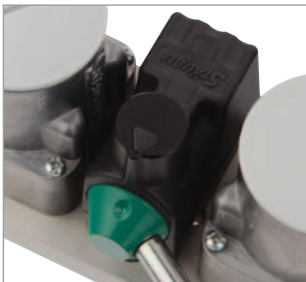
A wide variety of additional options and equipment

Options

That come with the product upon order: see corresponding codes on pages 9 to 11.

Reversed control lever

LH option



Even more circuits in a small space.

This option makes it possible:

- for moulds with many circuits, to install 2 plates side by side in a confined space whilst keeping the same operating direction of the control lever
- for installation configurations where there is not enough clearance for

the lever, to reverse the position of the lever whilst keeping the same operating direction

- to optimise available space on moulds and presses whilst maintaining easy handling

Immediate identification in green.



Proximity sensor

DP option

Controls "connected" and "disconnected" positions so as to avoid partial connection of the plates and ensures the full connection of the electrical contacts for operation in complete safety for both the users and the installations.

PNP sensors.

Self locking wire connection using standard M12 electrical connectors makes connection to the electrical cabinet easier, enables the quick replacement of the sensor and avoids any connection errors.



A proximity sensor must be used for applications exceeding 50 volts.



Additional equipment

To be ordered separately: see references on page 13.

Parking plate

for plate storage when not in use.

Parking plates can be fitted with a proximity sensor (as an option).

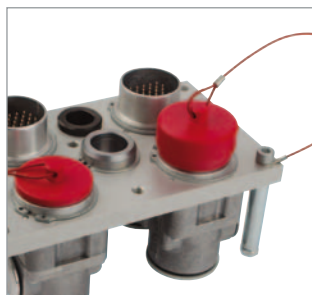


Foolproof keying kit

Enables all connection errors to be avoided when using several plates on the same mould.

Protective cap for housings

Ensures that the contacts are protected against external aggressions, contamination and damage when storing the moulds.



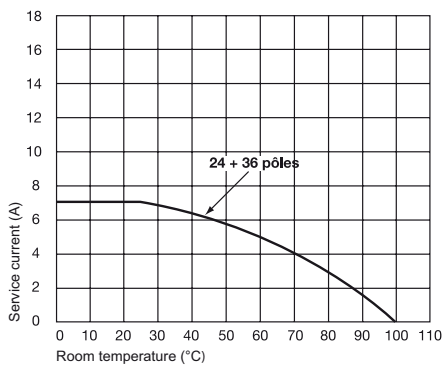
Carrying handle

For even easier handling.
3 possible locations on the REP 203.

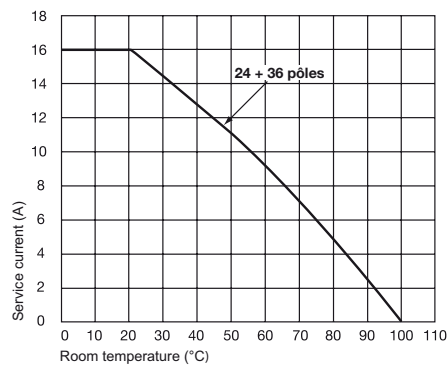


Derating curves

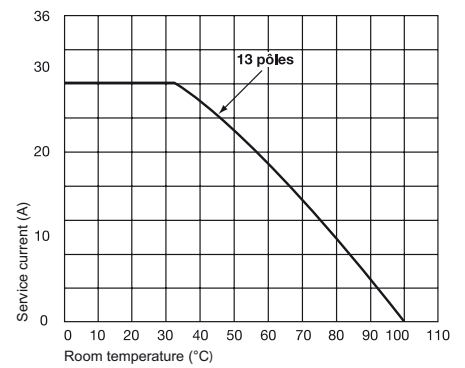
Contacts : 1.5 / 2 mm
Connection: 0.75 / 1 mm²



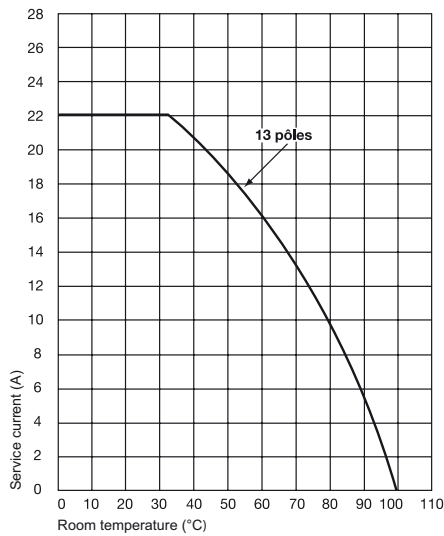
Contacts : 1.5 / 2 mm
Connection: 1.5 mm²



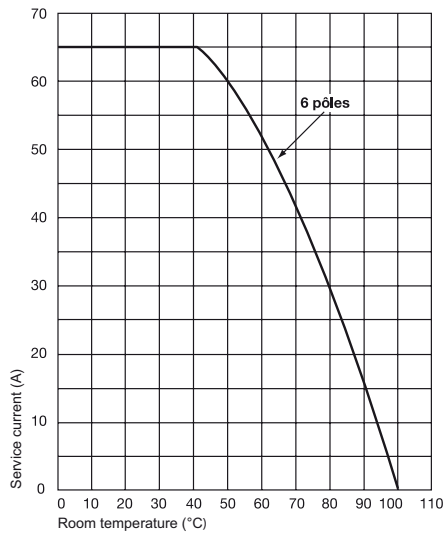
Contacts : 3 mm
Connection: 4 mm²



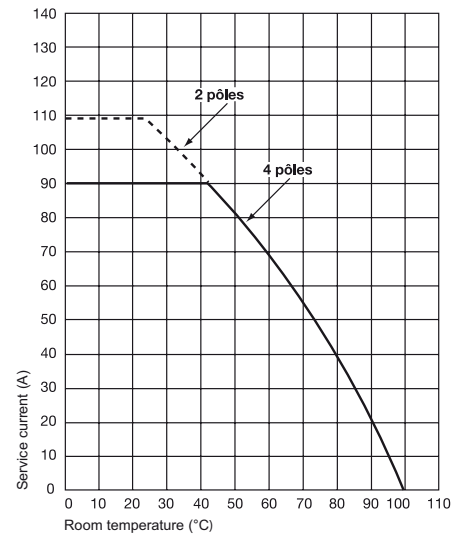
Contacts : 3 mm
Connection: 2.5 mm²



Contacts : 5 mm
Connection: 10 mm²







Contacts : 6 mm
Connection: 16 mm²



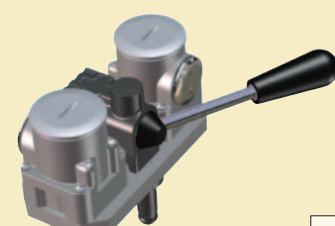

Part-numbers

REP 103.02

Side	Connection	
	A	B
Mobile plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5
Fixed plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5

Part-numbers for mobile plates fitted with 2 female housings

Power supply side

REP 103.02.1102

REP 103.02.1122

REP 103.02.1132

Part-numbers for mobile plates fitted with 2 male housings

Receiver side



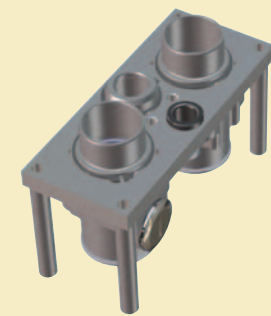


REP 103.02.1602

REP 103.02.1622

REP 103.02.1632

Part-numbers for fixed plates fitted with 2 male housings

Receiver side

REP 103.02.6602

REP 103.02.6622

REP 103.02.6632

Part-numbers for fixed plates fitted with 2 female housings

Power supply side




REP 103.02.6102

REP 103.02.6122

REP 103.02.6132

Sizes: see page 14.

Options

Add the corresponding codes to the part-numbers above:

- Reversed control lever **code /LH**
- Proximity sensor **code /DP**

Plates are fitted with standard housings and Nitrile seals (NBR). Housings are also available on request with Fluorocarbon seals (FPM): see part-numbers on page 13.





Additional equipment

Parking plate, carrying handle, protective caps for housings, foolproof keying kits: see part-numbers on page 13.

* Electrical inserts are to be ordered separately: see part-numbers on page 12.

Part-numbers

REP 203.03

Side	Connection	
	A	B
Mobile plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5
Fixed plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5

Part-numbers for mobile plates fitted with 3 female housings

Power supply side



Female insert * 

REP 203.03.1102

REP 203.03.1122

REP 203.03.1132

Part-numbers for mobile plates fitted with 3 male housings

Receiver side



Male insert * 

REP 203.03.1602

REP 203.03.1622

REP 203.03.1632

Part-numbers for fixed plates fitted with 3 male housings

Receiver side



Male insert * 

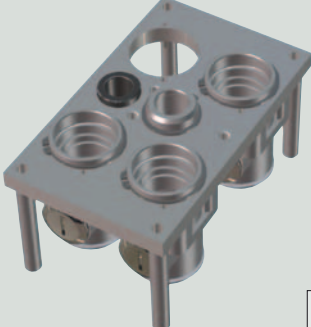
REP 203.03.6602


REP 203.03.6622

REP 203.03.6632

Part-numbers for fixed plates fitted with 3 female housings

Power supply side



Female insert * 





REP 203.03.6102

REP 203.03.6122

REP 203.03.6132

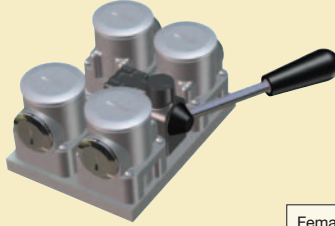
Sizes: see page 14.

REP 203.04

Side	Connection	
	A	B
Mobile plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5
Fixed plate		
	PG 36	PG 29
	NPT 1	NPT 1
	M 40 x 1.5	M 32 x 1.5

Part-numbers for mobile plates fitted with 4 female housings

Power supply side




REP 203.04.1102

REP 203.04.1122

REP 203.04.1132

Part-numbers for mobile plates fitted with 4 male housings

Receiver side




REP 203.04.1602

REP 203.04.1622

REP 203.04.1632

Part-numbers for fixed plates fitted with 4 male housings

Receiver side



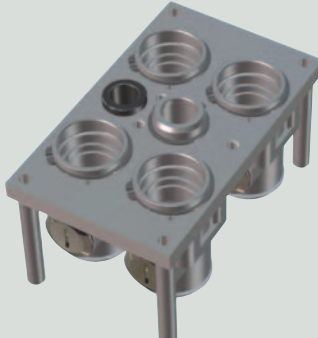


REP 203.04.6602

REP 203.04.6622

REP 203.04.6632

Part-numbers for fixed plates fitted with 4 female housings

Power supply side

REP 203.04.6102

REP 203.04.6122

REP 203.04.6132

Sizes: see page 14.

Options

Add the corresponding codes to the part-numbers above:

- Reversed control lever **code /LH**
- Proximity sensor **code /DP**

Plates are fitted with standard housings and Nitrile seals (NBR). Housings are also available on request with Fluorocarbon seals (FPM): see part-numbers on page 13.







Additional equipment

Parking plate, carrying handle, protective caps for housings, foolproof keying kits: see part-numbers on page 13.

* Electrical inserts are to be ordered separately: see part-numbers on page 12.

Part-numbers

• Inserts

Inserts	Number of contacts	Pins or sockets Ø (mm)	Current for each contact in operation (A)	Voltage (V)	Wire section of connection (mm ²)	Part-numbers	
						Female inserts	Male inserts
	3 (2 + earthing)	6	110 (per contact)	550	16	REA 13.1002.0360	REA 13.6002.0360
	5 (4 + earthing)	6	90 (per contact)	400	16	REA 13.1002.0560	REA 13.6002.0560
	7 (6 + earthing)	5	63 (per contact)	400	10	REA 13.1002.0750	REA 13.6002.0750
	14 (13 + earthing)	3	36 (per contact)	400	2.5 - 4	REA 13.1002.1430	REA 13.6002.1430
	25 (24 + earthing)	1.5	16 (per contact)	250	0.5 - 1.5	REA 13.1002.2515	REA 13.6002.2515
	37 (36 + earthing)	1.5	16 (per contact)	250	0.5 - 1.5	REA 13.1002.3715	REA 13.6002.3715
		2	16 (pear contact)	250	0.5 - 2.5	REA 13.1002.3720*	REA 13.6002.3720*

Inserts are fitted with standard silver contacts.


Part-numbers of spare inserts: see product leaflet RU1300300.


Gold contacts on option: add code /D to the above part-numbers.

* Silicone inserts


Tools

• For crimping contacts


	Wire section of connection (mm ²)	Part-number
	0.5 - 0.75 - 1 - 1.5 - 2.5 - 4	REA 13.9092.50

	Wire section of connection (mm ²)	Part-number
	6 - 10 - 16 - 25 - 35	REA 13.9092.60

• Tools for assembling and disassembling the contacts on the inserts





Assembly tools for pins and sockets	
Contact diameter (pins and sockets) (mm)	Part-numbers
1.5 - 2	REA 13.9002.20
3	REA 13.9002.30
5	REA 13.9002.50
6	REA 13.9002.60

Tools for disassembling pins	
Contact diameter (pins) (mm)	Part-numbers
1.5 - 2	REA 13.9012.15
2	REA 13.9012.20
3	REA 13.9012.30
5	REA 13.9012.50
6	REA 13.9012.60

Tool for disassembling sockets	
Contact diameter (sockets) (mm)	Part-numbers
1.5 - 2	REA 13.9022.15
2	REA 13.9022.20
3	REA 13.9022.30
5	REA 13.9022.50
6	REA 13.9022.60

Part-numbers

• Housings only

Connection		Housings part-numbers (without inserts)	
 A	 B	 Female	 Male
PG 36	PG 29	REP 03.2002	REP 03.4002
NPT 1	NPT 1	REP 03.2202	REP 03.4202
M 40 x 1.5	M 32 x 1.5	REP 03.2302	REP 03.4302

PG 36 delivered with plastic cap.
 PG 29 delivered with metal caps.
 NPT 1 diameter A delivered without cap and diameter B delivered with metal cap.
 M 40 et M 32 delivered with metal caps.

Housings are fitted with standard nitrile joints (NBR).
 They are also available with Fluorocarbon joints (FPM): please contact us.

Part-numbers for additional equipment

To be ordered separately.

• Parking plate


	Plate model	Part-numbers
	REP 103	MPP 01.9001
	REP 203	MPP 01.9002

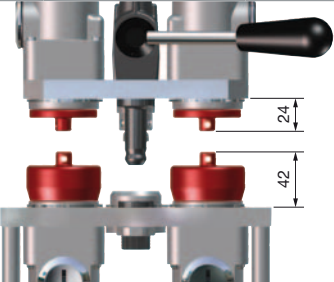
Proximity sensor option: add code /DP to the above references

• Foolproof keying kits


Plate model	Equipment	Kits part-numbers
REP 103	Mobile plate	KCP 01.9005
	Fixed plate	KCP 01.9006
REP 203	Mobile plate	KCP 01.9005
	Fixed plate	KCP 01.9006/Q2

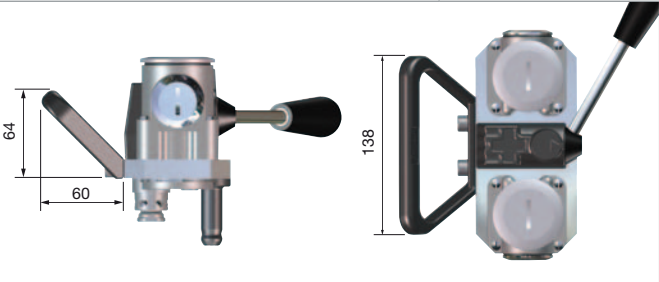
• Protective caps for housing

	Type of housing	Part-numbers
	Female housing	REA 03.8502
	Male housing	REA 03.8552



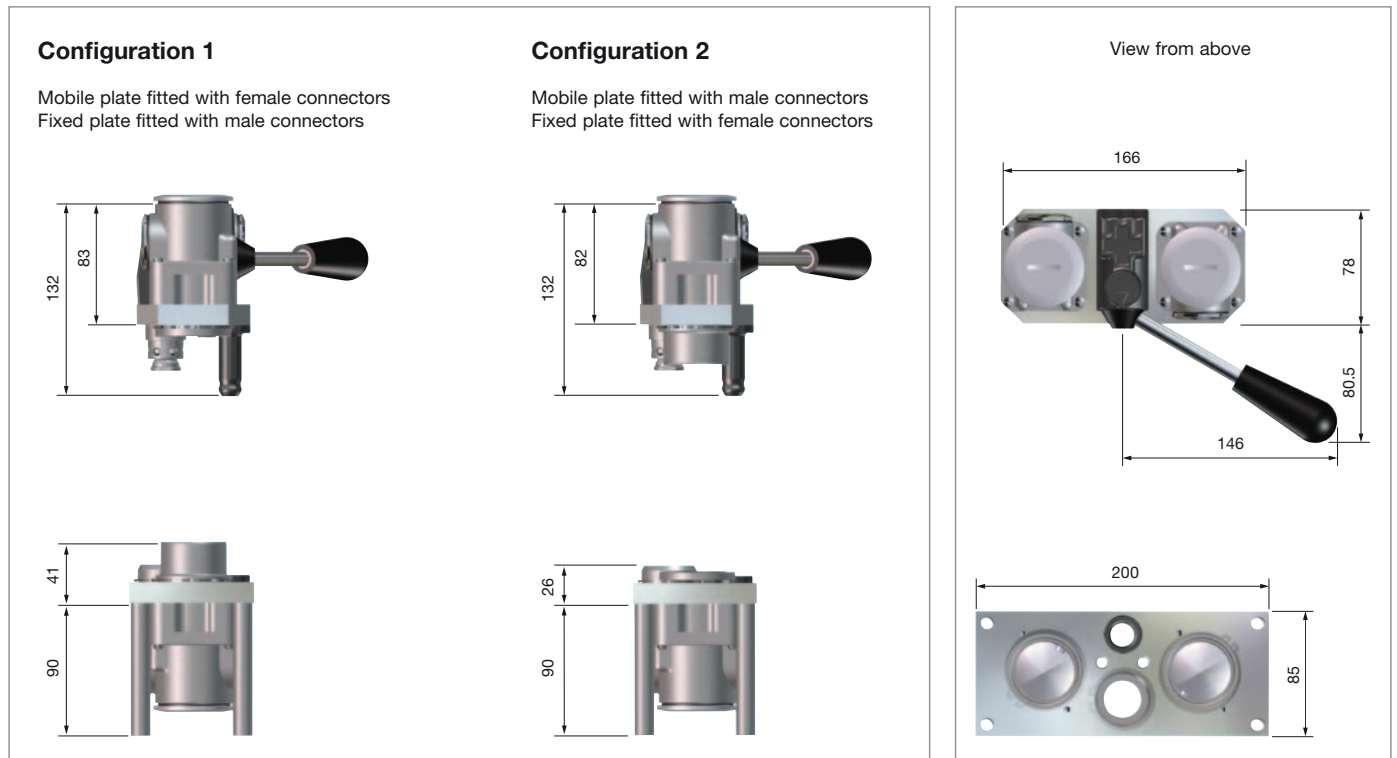
• Carrying handle

Delivered with washers and fastening screws	Part-number
	RMP 111.61

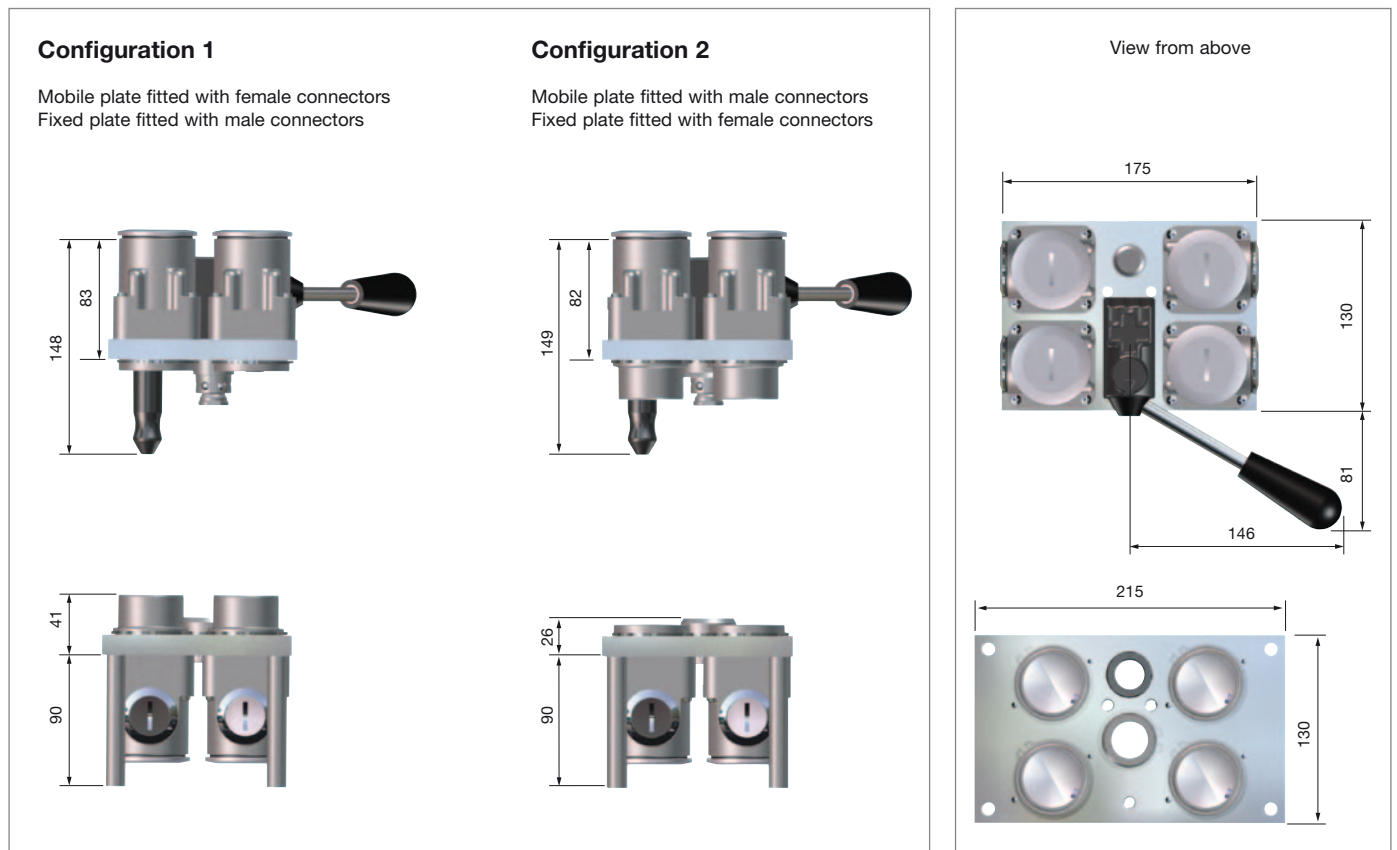


Dimensioning plans

REP 103.02



REP 203.03 and 203.04





Technical features

• Housings

- aluminium
- seals:
 - Standard nitrile (NBR)
 - Fluorocarbon (FPM) on request

• Inserts

Insulator support:

- Black NBR synthetic rubber

Number of contacts: 2 to 36 + earthing depending on models

• Crimped contacts

Excellent temperature stability and very good resistance to vibrations. Crimped contacts. These contacts can also be soldered.

- Silver CuZn alloy as standard
- Gold contacts on option: add code /D to the part-numbers for inserts
- Smooth pins
- Sockets with Multilam[®] contacts
- Current for each contact: up to 110 A depending on the model and wiring section
- Voltage: up to 550 V depending on the model
- Crimped section of wiring: 0.5 mm² to 16 mm² depending on the model

Min./max. operating temperatures

Insert :

- Black NBR synthetic rubber - 20 °C to + 100 °C

Housing seals:

- Nitrile (NBR) - 10 °C to + 100 °C

Compliant with standards

- Protection rating of housings in connected position: IP 67 in compliance with standards NF EN 60529 and CEI 60529
- Protection rating and resistance to test finger (socket side): IP2X in compliance with standards NF EN 60529 and CEI 60529
- Creeping and clearance distances in compliance with standards NF EN 60664-1 and CEI 60664-1 (pollution degree 3 / overvoltage category III)
- NF EN 61984, CEI 61984, and VDE 0627
- DIN VDE 0298-4

For contact details: www.staubli.com/connectors/contacts



Global presence of the Stäubli Group

- Stäubli units
- Agents

International sales coordination

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www.staubli.com

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